

Environmental Protection Agency

Pt. 53, Subpt. E, Fig. E-1

Subpart E procedure	Performance test	Performance specification	Test conditions	Part 50, appendix L reference
§ 53.57 Filter temperature control test.	1. Filter temp. meas. accuracy. 2. Ambient temp. meas. accuracy. 3. Filter temp. control accuracy, sampling and non-sampling.	1. 2 °C 2. 2 °C 3. Not more than 5 °C above ambient temp. for more than 30 min.	(a) 4-hour simulated solar radiation, sampling. (b) 4-hour simulated solar radiation, non-sampling. (c) Solar flux of 1000 ±50 W/m ² .	Sec. 7.4.8. Sec. 7.4.10. Sec. 7.4.11.
§ 53.58 Field precision test.	1. Measurement precision. 2. Storage deposition test for sequential samplers.	1. P _i < 2 µg/m ³ or RP _j < 5%. 2. 50 µg max. average weight gain/blank filter.	(a) 3 collocated samplers at 1 site for at least 10 days. (b) PM _{2.5} conc. > 3 µg/m ³ ... (c) 24- or 48-hour samples (d) 5- or 10-day storage period for inactive stored filters.	Sec. 5.1. Sec. 7.3.5. Sec. 8. Sec. 9. Sec. 10.
The Following Requirement Is Applicable to Class I Candidate Equivalent Methods Only				
§ 53.59 Aerosol transport test.	Aerosol transport	97%, min. for all channels..	Determine aerosol transport through any new or modified components with respect to the reference method sampler before the filter for each channel.	

[72 FR 32208, June 12, 2007]

TABLE E-2 TO SUBPART E OF PART 53—SPECTRAL ENERGY DISTRIBUTION AND PERMITTED TOLERANCE FOR CONDUCTING RADIATIVE TESTS

Characteristic	Spectral Region			
	Ultraviolet		Visible	Infrared
Bandwidth (µm)	0.28 to 0.32	0.32 to 0.40	0.40 to 0.78	0.78 to 3.00
Irradiance (W/m ²)	5	56	450 to 550	439
Allowed Tolerance	±35%	±25%	±10%	±10%

[62 FR 38799, July 18, 1997; 63 FR 7714, Feb. 17, 1998]

FIGURE E-1 TO SUBPART E OF PART 53—DESIGNATION TESTING CHECKLIST

DESIGNATION TESTING CHECKLIST

Auditee			Auditor signature	Date
Compliance Status: Y = Yes N = No NA = Not applicable/Not available			Verification Comments (Includes documentation of who, what, where, when, why) (Doc. #, Rev. #, Rev. Date)	
Verified by Direct Observation of Process or of Documented Evidence: Performance, Design or Application Spec. Corresponding to Sections of 40 CFR Part 53 or 40 CFR Part 50, Appendix L				
Y	N	NA		
			Performance Specification Tests	
			Sample flow rate coefficient of variation (§ 53.53) (L-7.4.3)	
			Filter temperature control (sampling) (§ 53.57) (L-7.4.10)	
			Elapsed sample time accuracy (§ 53.54) (L-7.4.13)	
			Filter temperature control (post sampling) (§ 53.57) (L-7.4.10)	
			Application Specification Tests	
			Field Precision (§ 53.58) (L-5.1)	

Pt. 53, Subpt. E, Fig. E-2

40 CFR Ch. I (7-1-12 Edition)

Compliance Status: Y = Yes N = No NA = Not applicable/Not available			Verification Comments (Includes documentation of who, what, where, when, why) (Doc. #, Rev. #, Rev. Date)
Verification			
Y	N	NA	
			Verified by Direct Observation of Process or of Documented Evidence: Performance, Design or Application Spec. Corresponding to Sections of 40 CFR Part 53 or 40 CFR Part 50, Appendix L
			Meets all Appendix L requirements (part 53, subpart A, § 53.2(a)(3)) (part 53, subpart E, § 53.51(a),(d))
			Filter Weighing (L–8)
			Field Sampling Procedure (§ 53.30, .31, .34)
			Design Specification Tests
			Filter (L–6)
			Range of Operational Conditions (L–7.4.7)
The Following Requirements Apply Only to Class I Candidate Equivalent Methods			
			Aerosol Transport (§ 53.59)

FIGURE E-2 TO SUBPART E OF PART 53—PRODUCT MANUFACTURING CHECKLIST

PRODUCT MANUFACTURING CHECKLIST

Auditee			Auditor signature		Date
Compliance Status: Y = Yes N = No NA = Not applicable/Not available					
Verification			Verification Comments (Includes documentation of who, what, where, when, why) (Doc. #, Rev. #, Rev. Date)		
Y	N	NA			
			Performance Specification Tests		
			Assembled operational performance (Burn-in test) (§ 53.53)		
			Sample flow rate (§ 53.53) (L-7.4.1, L-7.4.2)		
			Sample flow rate regulation (§ 53.53) (L-7.4.3)		
			Flow rate and average flow rate measurement accuracy (§ 53.53) (L-7.4.5)		
			Ambient air temperature measurement accuracy (§ 53.55) (L-7.4.8)		
			Ambient barometric pressure measurement accuracy (§ 53.56) (L-7.4.9)		
			Sample flow rate cut-off (§ 53.53) (L-7.4.4)		
			Sampler leak check facility (§ 53.52) (L-7.4.6)		
			Application Specification Tests		
			Flow rate calibration transfer standard (L-9.2)		
			Operational /Instructional manual (L-7.4.18)		
			Design Specification Tests		
			Impactor (jet width) (§ 53.51(d)(1)) (L-7.3.4.1)		
			Surface finish (§ 53.51(d)(2)) (L-7.3.7)		